

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 24717-715		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US01/32309	International filing date (day/month/year) 17 October 2001 (17.10.2001)	Priority date (day/month/year) 17 October 2000 (17.10.2000)	
International Patent Classification (IPC) or national classification and IPC IPC(7): G01R 31/08 and US Cl.: 370/252			
Applicant ROUTESCIENCE TECHNOLOGIES, INC.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>0</u> sheets.</p> <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 14 May 2002 (14.05.2002)		Date of completion of this report 01 April 2004 (01.04.2004)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Phirin Sam Telephone No. (703) 308 - 9294	

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US01/32309

I. Basis of the report1. With regard to the **elements** of the international application:*

- ☒ the international application as originally filed.
- ☒ the description:
pages 1-20 _____ as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the claims:
pages 21-29 _____, as originally filed
pages NONE _____, as amended (together with any statement) under Article 19
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the drawings:
pages 1-3 _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US01/32309

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>7, 8, 20-31, 33, and 35</u>	YES
	Claims <u>1-6, 9-19, 32, 34, and 36-49</u>	NO
Inventive Step (IS)	Claims <u>7, 8, 20-31, 33, and 35</u>	YES
	Claims <u>1-6, 9-19, 32, 34, and 36-49</u>	NO
Industrial Applicability (IA)	Claims <u>1-49</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

1. Claims 1-6, 9-19, 32, 34, and 36-49, lack novelty under PCT Article 33(2) as being anticipated by Engel et al. (U.S. Patent 6,115,393).

Engel et al. discloses the invention (**claim 1-6 and 39-49**) as claimed a networking system, comprising:

- (a) a plurality of one or more devices communicating at least a first plurality of one or more measurement packets over a first plurality of one or more paths, each of the first plurality of one or more paths traversing at least a portion of an internetwork (see Fig. 1, element 10, col. 6, lines 46-65, and col. 7, lines 4-9), and each of the first plurality of one or more measurement packets including:
 - (b) information of a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet (see Figs. 5 and 24, col. 10, lines 45-50, 57-63, col. 11, lines 53-56).
 - (c) data including one or more of measurement statistics, a generic communication channel, network information, and control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver (see Fig. 5, col.10, lines 57-63, col. 11, lines 57-67).

Regarding claims 9-19, 32, 34, and 36-38, Engel et al. discloses a method for communicating data within measurement traffic, the method comprising:

- (a) sending a first plurality of one or more measurement packets over a first plurality of one or more paths, each of the first plurality of one or more paths traversing at least a portion of an internetwork (see Figs. 1, 3, and 4, col. 9, lines 15-24, 32-43), and each of the first plurality of one or more measurement packets including:
 - (a1) information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet (see Fig. 5, col. 10, lines 57-63).
 - (a2) data including one or more of measurement statistics, a generic communication channel, network information, and control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver (see Fig. 5, col. 11, lines 53-56).
- (b) receiving a second plurality of one or more measurement packets over a second plurality of one or more paths, each of the second plurality of one or more paths traversing at least a portion of an internetwork 1, 3, and 4, col. 9, lines 15-24, 32-43), and each

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

of the second plurality of one or more measurement packets including:

(b1) information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet (see Fig. 5, col. 10, lines 57-63).

(b2) data including one or more of measurement statistics, a generic communication channel, network information, and control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver (see Fig. 5, col. 11, lines 53-56).

2. Claims 7-8, 20-31, 33, and 35 meet the criteria set out in PCT Article 33(2)-(3), because:

Regarding claims 7, 8, and 21-31, the prior art does not teach or fairly suggest analyzing of the measurement packet based on a dynamic algorithm, the dynamic algorithm computing computed statistics on one or more of the measurements of performance characteristics of at least a portion of the path of the measurement packet.

Regarding claim 20, the prior art does not teach or fairly suggest the synchronization methods including at least one or more of GPS, NTP, IRIG, and NIST.

Regarding claim 33, the prior art does not teach or fairly suggest at least implemented with at least one of a GRE tunnel and an IPSEC tunnel.

Regarding claim 35, the prior art does not teach or fairly suggest a plurality of one or more BGP autonomous systems.